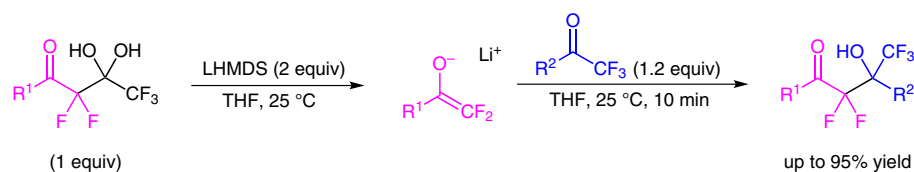
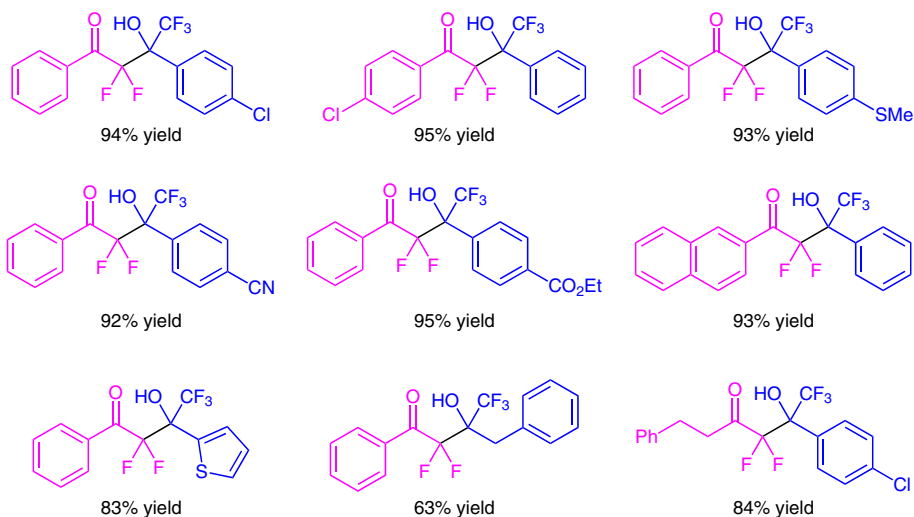


## Pentafluorinated $\beta$ -Hydroxy Ketone Synthesis via Lithium-Mediated Aldol Reaction



R<sup>1</sup> = Ph, 4-ClC<sub>6</sub>H<sub>4</sub>, Naph, (CH<sub>2</sub>)<sub>2</sub>Ph  
R<sup>2</sup> = Ar, 2-thienyl, Bn

### Selected examples:



**Significance:** A fast and mild synthesis of pentafluorinated  $\beta$ -hydroxy ketones has been disclosed. The reaction proceeds via a lithium-promoted aldol reaction of readily available difluoroenolate precursors with trifluoromethyl ketones furnishing the corresponding pentafluorinated  $\beta$ -hydroxy ketones in good to excellent yield.

**Comment:** The described reaction is very versatile since it proceeds under ambient temperature and tolerates a broad range of functional groups. Furthermore, the authors show that the reduction of the pentafluorinated  $\beta$ -hydroxy ketones furnishes quantitatively the corresponding 1,3-diols favoring the *syn*-isomer.